BEFORE THE

STATE CORPORATION COMMISSION

OF VIRGINIA

Application of	)	
	)	
Verizon Virginia Inc.	)	**Case No. PUC-2007-_____**
and	)	
Verizon South Inc.	)	
	)	
For a Determination that Retail Services Are	)	
Competitive and Deregulating and Detariffing	)	
of the Same	)	

BLACKSBURG (BCR)
EXHIBITS

PUBLIC VERSION

Blacksburg (BCR) Exhibits

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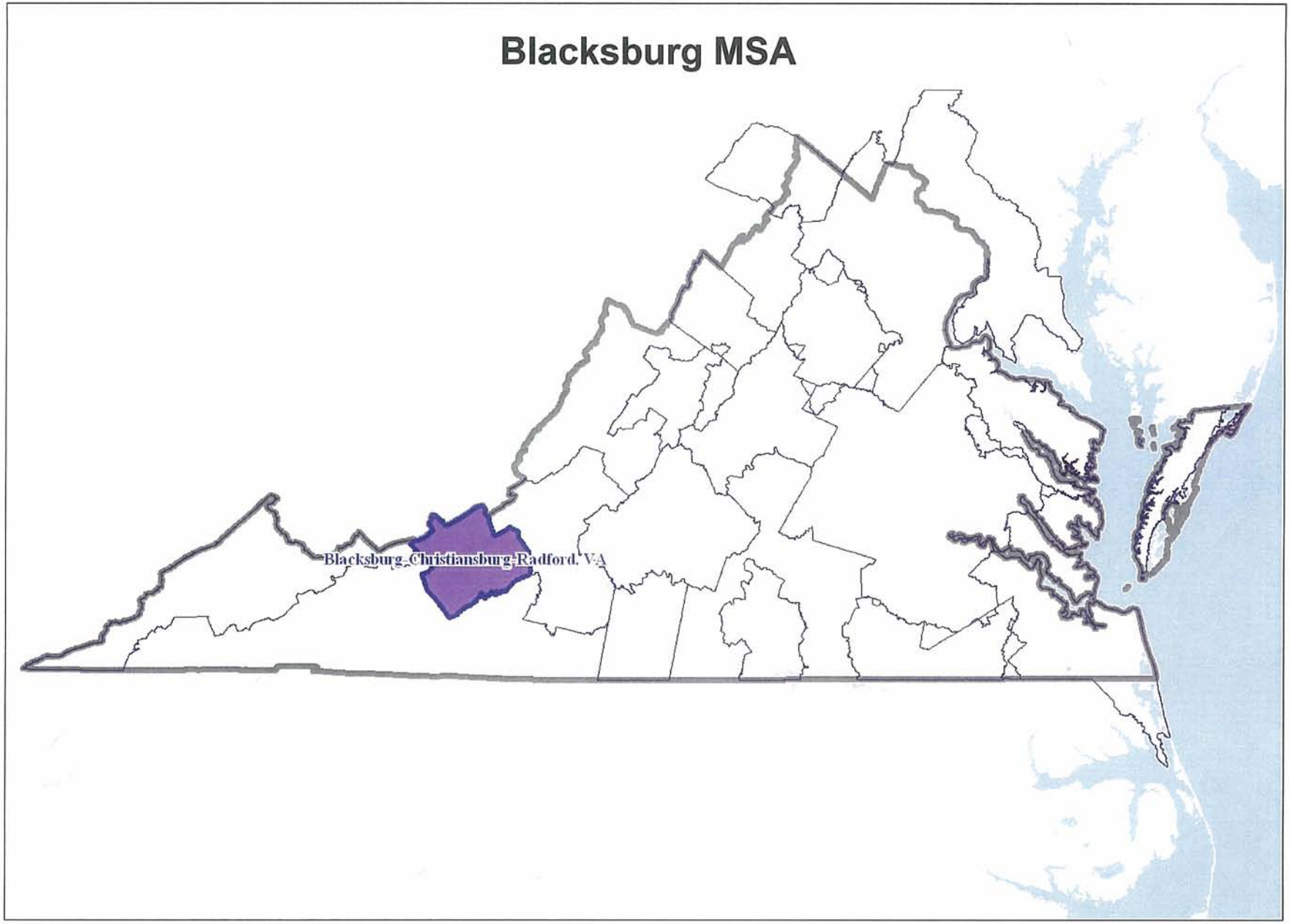
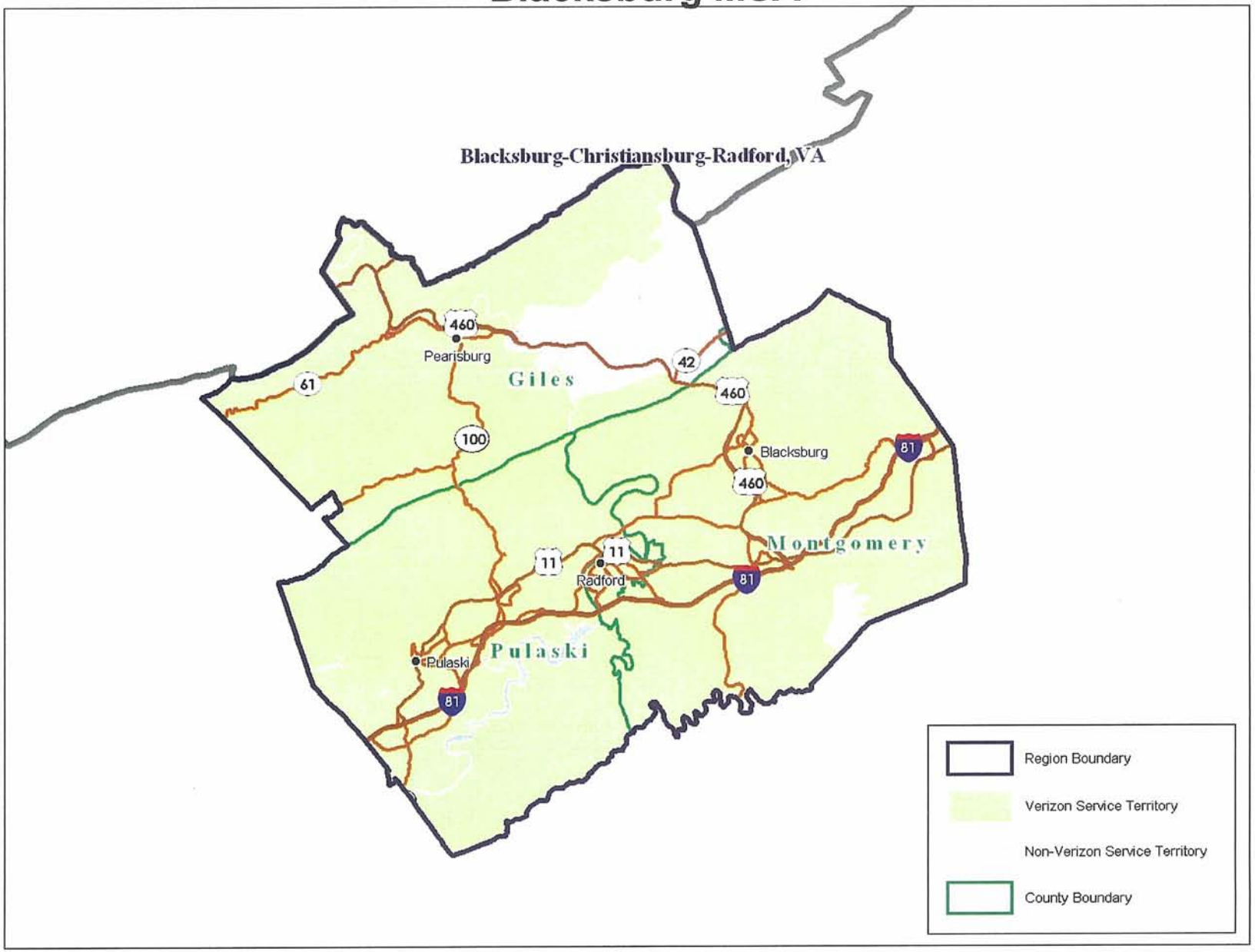
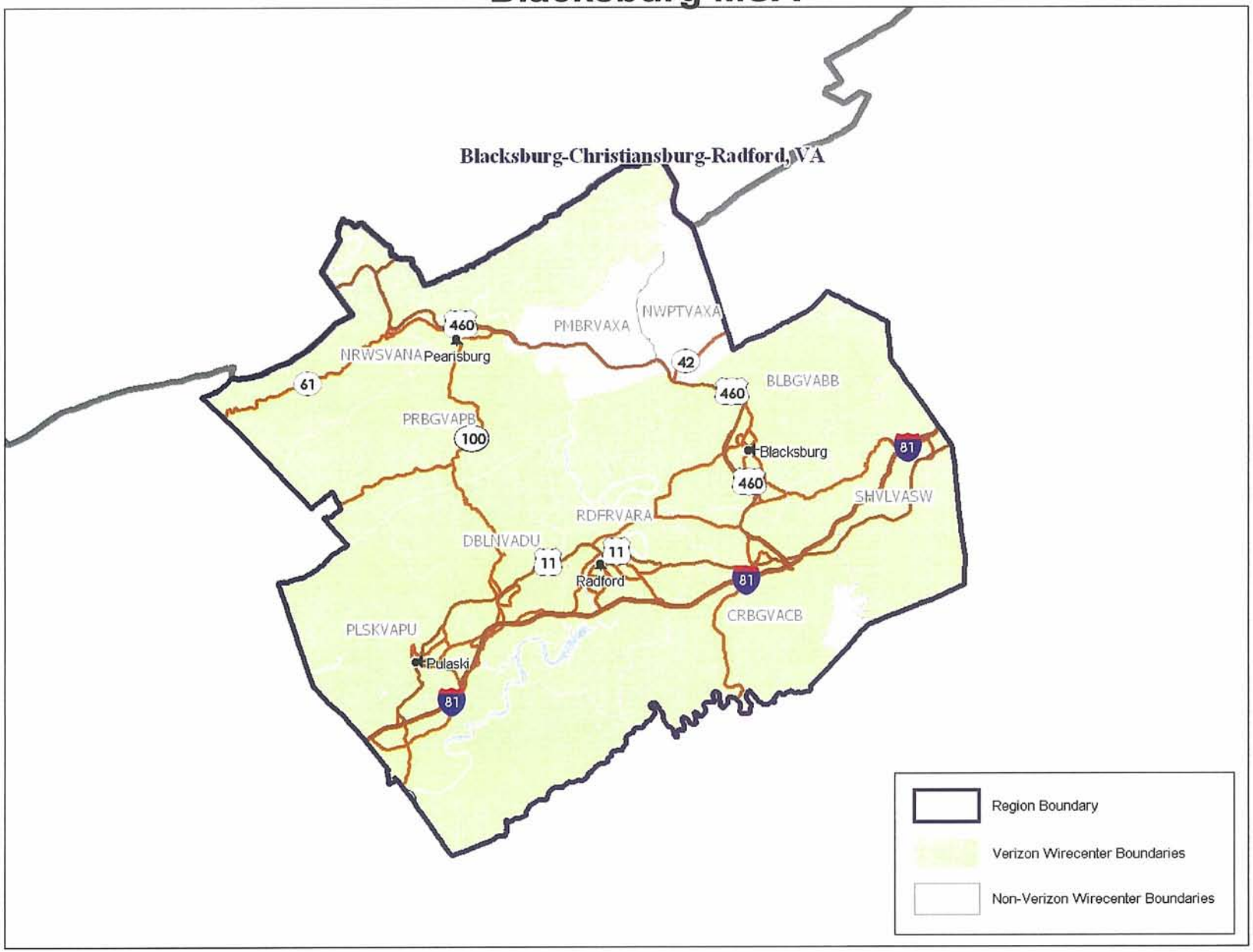


Exhibit BCR-1, page 1 of 3

Blacksburg MSA



Blacksburg MSA



BCR-2

Exhibit BCR-2

COMPETITION AND POTENTIAL COMPETITION FOR RETAIL TELECOMMUNICATIONS SERVICES IN VERIZON'S BLACKSBURG-CHRISTIANSBURG-RADFORD MSA SERVICE TERRITORY

Report of Jeffrey A. Eisenach, Ph.D.
January 17, 2007

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I. OVERVIEW

Verizon's service territory in the Blacksburg-Christiansburg-Radford ("BCR") MSA consists of 1,008 square miles, with a population of 151,113 living in 58,454 households as of 2006. Also as of 2006, there were 5,084 business establishments.[1] The average population density is 149.9 persons per square mile, and the median household income is $39,169.[2] Verizon operates eight wire centers in the region.[3]

The BCR MSA is located in the 540 area code, and consists of Montgomery, Pulaski and Giles counties. It is bordered by the Roanoke Region on the northeast, Floyd County to the southeast, Bland and Wythe counties to the southwest, and West Virginia to the northwest; it is bisected from northeast to southwest by I-81.[4] The area is home to Virginia Polytechnic Institute and State University (Virginia Tech), which has more than 25,000 full time students.[5] The region is a mix of rural and moderately urban areas: Its least densely populated wire center is in Pearisburg, in the northwest portion of the region, with 45 persons per square mile; the most densely populated wire center is Blacksburg, with 356 persons per square mile.[6]

Competition throughout the BCR MSA is intense. Facilities-based competition from traditional CLECs is extensive, with **[BEGIN CONFIDENTIAL]**

[END CONFIDENTIAL]

1. *See* Exhibit BCR-4.
2. *See id.*
3. *See* Exhibit BCR-3.
4. *See* Exhibit BCR-1.
5. Virginia Tech, About, http://www.vt.edu/about/ (last visited Nov. 28, 2006).
6. *See* Exhibit BCR-4.
7. **[BEGIN CONFIDENTIAL]**

[END CONFIDENTIAL]

8. *See* Exhibit BCR-14.
9. *See* Exhibit BCR-14.

Mobile wireless coverage is ubiquitous, and **[BEGIN CONFIDENTIAL]**
[END CONFIDENTIAL] consider their cell phone to be their primary telephone.

With respect to broadband, almost three-quarters of customers have access to cable modem service, and a variety of other broadband options are available from CLECs as well as from fixed wireless providers, whose service territories cover over 87 percent of both residences.

There are no barriers to entry. Significant entry has already occurred and more is underway. New broadband providers recently have begun providing next generation broadband services in the region, including in its more rural areas. For example, the Citizens Telephone Cooperative, which is the incumbent in neighboring Floyd County, offers both fixed and mobile broadband at competitive prices using OFDM technology, and Shentel's NTC subsidiary operates more than a dozen wi-fi hot spots in the region.

The analysis below of the availability and usage of existing alternative services, and of the conditions associated with potential competition and new entry, demonstrates that competition already regulates the prices of Verizon's retail telephony services in the BCR MSA, and that further entry and even more intense competition is a virtual certainty.

II. AVAILABILITY OF ALTERNATIVE SERVICES

All 58,454 households in the BCR MSA and all 5,084 businesses in the BCR region have the option to obtain alternatives to Verizon's BLETs, OLETS and Bundled Services from competitive providers. Facilities-based competition is widespread, and includes both traditional CLECs and cable providers, but numerous CLECs also provide services through resale and/or Wholesale Advantage agreements. Mobile telephone service is ubiquitous, and broadband service is widely available.

A. Traditional CLECs[10]

Traditional CLECs provide robust competition throughout the BCR MSA, and facilities-based competition is widespread.

[BEGIN CONFIDENTIAL]

10. Here and in the remaining sections of this report, unless otherwise indicated, "traditional CLEC" refers to CLECs other than cable companies. "CLEC" refers to both traditional CLECs and cable companies.
11. *See* Exhibit BCR-14.
12. The E911 data includes lines that are unable to be assigned to a wire center. These unassignable lines are included in the aggregate competition information. This leads to some under representation of E911 lines when broken out by wire center.
13. Exhibit BCR-4.

[END CONFIDENTIAL][14]

In addition, Shentel provides triple-play voice-data-video services to 30 off-campus housing units for students of Virginia Tech, through its NTC subsidiary.[15] Neither Shentel nor NTC appear in any of Verizon's internal data. Thus, Shentel's lines are not included in any of the competitive totals presented in this section. Verizon has been unable to determine what facilities Shentel is utilizing to provide these services. However, Shentel operates three points of presence in the region, in Blacksburg, Christiansburg and Radford, through its relationship with ValleyNet.[16]

All households and businesses in the BCR MSA can receive service from traditional CLECs through resale and/or Wholesale Advantage services available from Verizon.[17] As of March 2006, **[BEGIN CONFIDENTIAL]**

[END CONFIDENTIAL]

Altogether, a total of **[BEGIN CONFIDENTIAL]**

[END CONFIDENTIAL][20]

B. Cable Telephony

Two cable companies serve the BCR MSA, Comcast (which purchased Adelphia's franchise territory) and Charter.[21] Comcast's infrastructure passes 58.3 percent of households, Charter's passes 12.8 percent.[22] Neither company has yet deployed cable telephony, but both infrastructures are already upgraded and telephony capable, both are rapidly deploying cable

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14. *See* Exhibit VA-18; *see also* http://www.ntelos.com/landline/maps/map_fiber.html.
15. *See* NTC, About Us, http://www.ntc-com.com/content/?title=template_about_us_page (last visited Dec. 3, 2006).
16. *See* Eisenach Testimony at Figure 8.
17. *See* Exhibit BCR-16.
18. *See* Exhibit BCR-14.
19. *See* Exhibit BCR-14.
20. See Exhibit BCR-14.
21. *See* Exhibit VA-10 and BCR-9. **[BEGIN CONFIDENTIAL]** **[END CONFIDENTIAL]**
22. *See id.*

telephony, and Comcast has announced its intention to deploy cable telephony throughout its systems in the near future.[23]

C. Mobile Telephony

Of the 58,454 households in the BCR MSA, all but 934 (1.6 percent) have access to at least one CMRS provider, and all but 7,069 (12.1 percent) have access to two or more carriers.[24] In addition to Verizon Wireless, there are five CMRS providers offering retail telephone services in the BCR MSA. They are Cingular, NTELOS, Sprint, T-Mobile, and US Cellular.[25]

There are 42 cellular towers in the BCR MSA.[26] Of these, eight have been constructed since 2004.[27] There is at least one cellular tower located in the area served by each of the eight Verizon wire centers.[28]

D. Broadband and VoIP

Increasingly, consumers are choosing to combine stand-alone broadband Internet access with VoIP services provided by "bring your own access" companies such as Vonage, thus creating their own bundles of broadband and retail telephony services. Both wireless broadband and VoIP services are available to almost nine out of ten.

Cable Modem and DSL Service: Both Charter and Comcast offer cable modem service throughout their service territories in the BCR region, serving 71.1 percent of all residences.[29] Also, as noted above, Shentel's NTC subsidiary provides cable modem service to Virginia Tech off campus housing units. In addition, Verizon makes DSL service without voice available to retail customers for $26.99 per month. Well over **[BEGIN CONFIDENTIAL] [END CONFIDENTIAL]** have access to DSL service.[30]

Broadband over Powerline: The City of Radford is in the process of creating a broadband over power line (BPL) network that will eventually be made available to all of its 15,000 residents.[31] Radford is in the first phase of the BPL roll out, where Radford University students living in off-campus dormitories are being provided with BPL service.[32] On-campus students can access the Internet via a Wi-Fi broadband network that is deployed at the university.[33] If the BPL trials are successful, then Radford may use its fiber optic ring to provide BPL service to all of its

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23. *See* West Testimony at 42. *See also* Comcast, FAQ, https://www.comcast.com/Customers/FAQ/FaqDetails.ashx?Id=3804 (last visited Dec. 3, 2006); *id* at https://www.comcast.com/Customers/FAQ/FaqDetails.ashx?Id=3807 (last visited Dec. 3, 2006).
24. *See* Exhibit BCR-12.
25. *See* Exhibit BCR-11.
26. *See* Exhibit BCR-10.
27. *See id.*
28. *Compare* Exhibit BCR-3 (map of wire center boundaries) and Exhibit BCR-10.
29. *See* Exhibit VA-10 and BCR-8.
30. *See* Exhibit VA-4.
31. BPL Today, *Radford, Va., has BPL Plan for Students*, BPL TODAY, Apr. 11, 2006, *available at* http://www.bpltoday.com/public/109.cfm?sd=2.
32. *See id.*
33. *See id.*

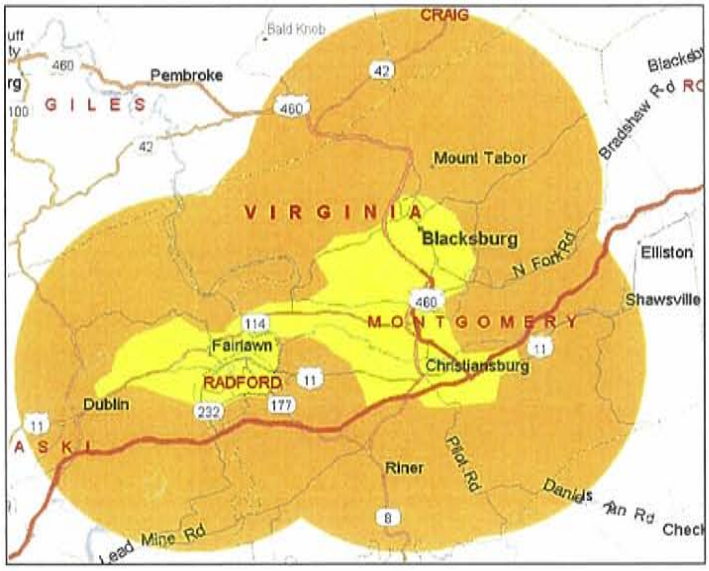
residents.[34] On May 26, 2006, Radford began the bidding process for firms seeking to build the BPL network.[35]

Fixed Wireless Service: In addition to wireline cable modem, DSL and BPL service, 87 percent of households have access to fixed wireless broadband services.[36] Providers include:

- Citizens Telephone Cooperative: Citizens Telephone Cooperative[37] offers wireless broadband service using OFDM technology,[38] which provides for both mobile and fixed service. The service is available throughout most of Montgomery and Pulaski counties, and a portion of Giles County.[39] Packages include the Bronze plan for $29.95 per month with 500 Kbps download and 128 Kbps upload speeds, the Silver plan for $39.95 per month with 1 Mbps download and 256 Kbps upload speeds, and the Gold plan for $49.95 per month with 1.5 Mbps download and 500 Kbps upload speeds.[40] For an additional $5 per month, a customer can rent a router from Citizens, allowing for use of the mobile wireless broadband service in a fixed application for both residential and business customers.[41] The service is marketed in part through a partnership with OfficeMax in Christiansburg.[42] Citizens' coverage area is shown in Figure 1 below.

34. *See id.*
35. City of Radford, Request for Proposal – Community Wireless and BBCRdband over Powerline (BPL) Network, http://www.radford.va.us/mainPages/News/BPL%20RFP.pdf (last visited June 11, 2006).
36. *See* Exhibit VA-4.
37. Citizens Telephone Co-op, http://www.citizens.coop (last visited July 13, 2006).
38. *See* Citizens Telephone Co-op, Desktop Router Reference Manual http://citizens.coop/internet/Desktop_Router_Reference_Manual.pdf (last visited Nov. 28, 2006); *id.* at http://citizens.coop/internet/Mobile_Modem_Card_User_Guide.pdf (last visited Nov. 28, 2006). OFDM technology is an alternative to Wi-Max. OFDM is a competitor to WiMax developed by Flarion Technology, now a subsidiary of Qualcomm. See Tricia Duryeee, *Skeptical Qualcomm crashes WiMax lovefest*, THE SEATTLE TIMES, Oct. 11, 2006, *available at* http://seattletimes.nwsource.com/html/businesstechnology/2003298579_wimax11.html.
39. Citizens Telephone Co-op, Coverage, http://shop.citizens.coop/index.php?pr=coverage (last visited June 21, 2006).
40. *See id* at http://www.citizens.coop/Internet/mobilebBCRdband.shtm (last visited June 21, 2006).
41. *See id.* at http://shop.citizens.coop/shopping/pgm-more_information.php?id=3&=SID#MOREINFO (last visited July 13, 2006).
42. *See* Press Release, Citizens Co-op, Citizens and OfficeMax Announce Partnership to Deliver Mobile BBCRdband in Christiansburg, http://citizens.coop/aboutus/newsreleases/OfficeMax.pdf (last visited Nov. 30, 2006).

Figure 1: Citizens Telephone Cooperative Mobile Broadband Service Territory



- B2X: B2X utilizes Motorola's Canopy technology to provide fixed wireless broadband in the BCR MSA.[43] B2X is based in Salem, Virginia and currently has service coverage in Montgomery County in the BCR MSA. Residential service is available, offering 1MB of bandwidth in each direction, for $42.50 per month.[44]

- New River Valley Unwired: New River Valley Unwired ("NRVU") provides wireless broadband service to residents of Christiansburg, Pilot Mountain, and Riner. The northern portion of NRVU's service territory is located in the BCR MSA.[45] Pricing for wireless broadband service is $35.00 per month,[46] which provides download speeds up to 3Mbps and upload speeds of approximately 1Mbps.[47]

- City of Radford: In addition to its BPL rollout, the City of Radford is undertaking a pilot project to trial wireless broadband technology.[48] Recently, the City Council approved $1 million to complete four deployments, starting with the most heavily populated Radford University section.[49]

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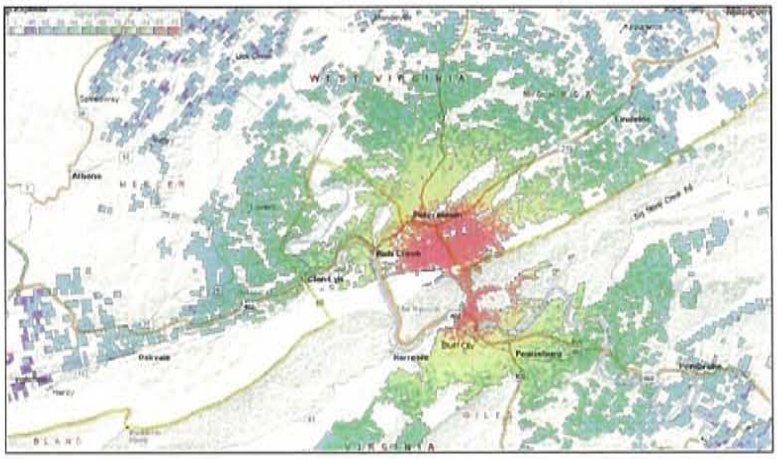
43. *See* B2X, Availability, http://www.b2xonline.com/availability.asp (last visited July 21, 2006).
44. *See id.* at http://www.b2xonline.com/speed.asp (last visited July 21, 2006); Altman Vilandrie, VA Wireless Providers 072806.xls.
45. New River Valley Unwired, http://nrvunwired.net (last visited June 12, 2006).
46. *See id.* at http://nrvunwired.net/features.htm (last visited June 12, 2006).
47. *See id.*
48. Paul Dellinger, *Radford Tries Out Broadband Internet Service*, BCRNOKE TIMES, Feb. 15, 2006, *available at* http://www.BCRnoke.com/news/nrv/wb/52677.
49. Paul Dellinger, *City Offers Internet Service,* BCRnoke Times, July 12, 2006, *available at* http://www.BCRnoke.com/news/nrv/wb/73359.

- WWVA.Net: WWVA.net offers fixed wireless broadband services in the western part of the BCR MSA, including the area just south of Pearisburg.[50] Speeds range up to 3Mbps, and prices begin at $20 per month. The company indicates VoIP plans are "coming soon," and also is planning to expand its service territory to cover "a large portion of Monroe and Giles Counties."[51] WWVA's "phase two" service territory is shown in Figure 2 below.

Figure 2: WWVA Expanded Service Territory



While the firms discussed above do not offer bundles that include VoIP services, customers have the option of purchasing alternatives to Verizon's BLETS, OLETS and Bundled Services from by-pass VoIP companies. VoIP providers that offer telephone numbers in the 540 area code include Net2Phone, Packet8, and Vonage.[52]

E. Overall Availability of Alternative Platforms and Competitors

Looking overall at the availability of service from alternative platform providers (i.e., from mobile wireless, cable modem, DSL, facilities-based CLECs, fixed wireless and BPL), 99 percent of all households in the BCR MSA have service available from at least one alternative platform provider and 72 percent have service from four or more alternative platforms.[53]

Similarly, looking overall at the availability of service from all competitors – i.e., the same measure as above, but counting each competitor separately (e.g., counting each CMRS provider separately), competition is even more extensive: 96 percent of households have competitive alternatives from at least two competitors, and 61 percent have access to service from eight or more Verizon competitors.[54]

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50. WVVA.net, Wireless Broadband, http://www.wvva.net/service2.htm (last visited Nov. 28, 2006).
51. *See id.*
52. See West Testimony at 81.
53. *See* Exhibit VA-4 and Exhibit BCR-5.
54. *See* Exhibit VA-5 and Exhibit BCR-6.

III. USAGE OF ALTERNATIVE SERVICES

Verizon's internal data shows that at least **[BEGIN CONFIDENTIAL] [END CONFIDENTIAL]** of wireline telephone lines in the BCR region were being served by competitors as of March 2006, and past trends would indicate that that proportion would have increased in the intervening months. However, these figures understate the true market share of competitors, since they fail to account for intermodal competition, such as from wireless and broadband.

Survey data indicates that **[BEGIN CONFIDENTIAL]**

[END CONFIDENTIAL] of households subscribe to broadband. Taking intermodal competition into account, the data presented below show that Verizon voice lines now account for only 40.1 percent of all wireline telephony, wireless telephony and broadband connections in the region.

Time series data presented at the end of this section also shows that Verizon's wireline market share is falling, both in proportion to the number of wirelines served and relative to the number of households in the region. Taken together, the data presented in detail below demonstrates that the competitive alternatives described in Section II represent viable alternatives for Verizon's BLETS, OLETS and Bundled Services in the BCR region, since customers are actually switching to them in large numbers.

A. Traditional CLECs and Cable Telephony

As detailed in Exhibit BCR-15, a total of **[BEGIN CONFIDENTIAL]**

[END CONFIDENTIAL]

These figures are consistent with the survey data presented by Mr. Newman, which shows that **[BEGIN CONFIDENTIAL] [END CONFIDENTIAL]** of residential customers in the BCR MSA are using providers other than Verizon.[57] In small MSAs (including the BCR MSA), the survey data shows that 20.3 percent of POTS business customers and 29.9 percent of all business customers are using other providers.[58]

Exhibit BCR-15 also demonstrates that wireline competition is ubiquitous throughout the BCR MSA. It shows that competitors are actually serving **[BEGIN CONFIDENTIAL] [END CONFIDENTIAL]** of the eight wire centers in

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55. This figure does not include approximately six percent of the population (who by definition were not reached through Verizon's telephone survey) who have cut the cord altogether. *See* West Testimony at 63.
56. *See* Exhibit BCR-15.
57. *See* Exhibit VA-21.
58. *See* Exhibit VA-20.

the BCR region, including the smallest and most rural wire centers. Furthermore, facilities-based competition is also widespread, with competitors serving significant numbers of customers using their own facilities in **[BEGIN CONFIDENTIAL] [END CONFIDENTIAL]** of the eight wire centers. These data demonstrate that alternatives to Verizon's BLETS, OLETS and Bundled Services from wireline competitors are available and in widespread use by both residential and enterprise customers throughout the BCR region.

B. Mobile Telephony

The survey data presented by Mr. Newman shows that **[BEGIN CONFIDENTIAL] [END CONFIDENTIAL]** of households in the BCR MSA purchase telephone service from mobile telephone companies.[59] Moreover, **[BEGIN CONFIDENTIAL]**

[END CONFIDENTIAL][60]

While Mr. Newman's testimony does not provide data on business usage of mobile telephones specifically for the BCR MSA, it does indicate that the proportion of businesses in small MSAs (including the BCR MSA) which purchase mobile telephone service is 50.8 percent,[61] and that 15.5 percent of business respondents consider their mobile telephone to be their primary means of voice communication.[62]

These figures do not include mobile telephone customers who have dropped their wireline service altogether, as these customers were not eligible for the telephone survey. As Mr. West's testimony indicates, national estimates suggest that approximately six percent of residential customers have "cut the cord."[63]

Again, these figures demonstrate that the mobile wireless alternatives available to consumers in the BCR MSA function as actual, viable alternatives to Verizon's BLETS, OLETS and Bundled Services.

C. Broadband and VoIP

The survey data presented by Mr. Newman show that **[BEGIN CONFIDENTIAL]**

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59. See Exhibit VA-21.
60. *See id.* Because the survey upon which Mr. Newman's estimates are based was conducted during the summer, when school was not in session, it likely underestimates the percentage of residential customers using competitive services, since college students are certainly under-represented in the results. We know that many students are using Shentel/NTC services, and, as Mr. West demonstrates, national data show students have high rates of reliance on mobile phones.
61. *See* Exhibit VA-20.
62. *See id.*
63. *See* West Testimony at 65.

[END CONFIDENTIAL][64]

These data show that the cable companies in the BCR region have been successful in selling at least the second (data) leg of their triple-play offerings, and that Verizon thus faces a substantial competitive challenge as it tries to retain customers in the face of cable's triple-play cable telephony offerings.

The survey data presented by Mr. Newman show that in small MSAs in Virginia (including the BCR region), 59.1 percent of businesses subscribe to high-speed broadband service.[65]

These overall usage rates for broadband demonstrate that the broadband plus VoIP "build your own bundle" option is available today to **[BEGIN CONFIDENTIAL] [END CONFIDENTIAL]** of all households and six of ten businesses, which already subscribe to broadband.

D. Overall Penetration of Wireline and Intermodal Competition

While it is not possible to estimate precisely the number of lines Verizon has lost to wireline and intermodal competitors, it is clear that competition is having a significant impact on Verizon's market share, and that wireline competitors are winning a growing proportion of customers. The data also indicate that intermodal competitors are winning a growing proportion of customers from wireline carriers of all types (i.e., including both Verizon and the traditional CLECs and cable telephony providers).

Both Verizon's line count and its wireline market share in the BCR MSA are dropping rapidly. As indicated in Figure 3 below, between December 2003 and March 2006 (i.e., in 27 months), the ratio of Verizon lines to households fell from **[BEGIN CONFIDENTIAL]**

[END CONFIDENTIAL][67]

During this same 27-month period, the number of residential wirelines served by wireline CLECs rose by **[BEGIN CONFIDENTIAL]**

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64. *See* Exhibit VA-21. Because this survey was conducted during the summer and therefore likely under-represents college students, many of whom use Shentel/NTC's cable modem services, it likely represents an overestimate of DSL use relative to cable modem use.
65. *See* Exhibit VA-20.
66. *See* Exhibits BCR-4 and BCR-19.
67. *See id.*
68. *See id.*
69. *See id.*
70. *See id.*

[END CONFIDENTIAL][71]

Figure 3 also demonstrates the significance of intermodal competition from wireless telephony and from broadband plus VoIP "build you own" bundles. It shows that the ratio of combined Verizon and CLEC residential lines to households fell from **[BEGIN CONFIDENTIAL]**

[END CONFIDENTIAL][72] Assuming people have not stopped using voice telephony altogether, these data clearly indicate that wireless and broadband providers are competing effectively with both Verizon and other traditional wireline providers – a conclusion which is consistent with the high rates of wireless telephony usage and broadband adoption discussed in above.

[BEGIN CONFIDENTIAL]

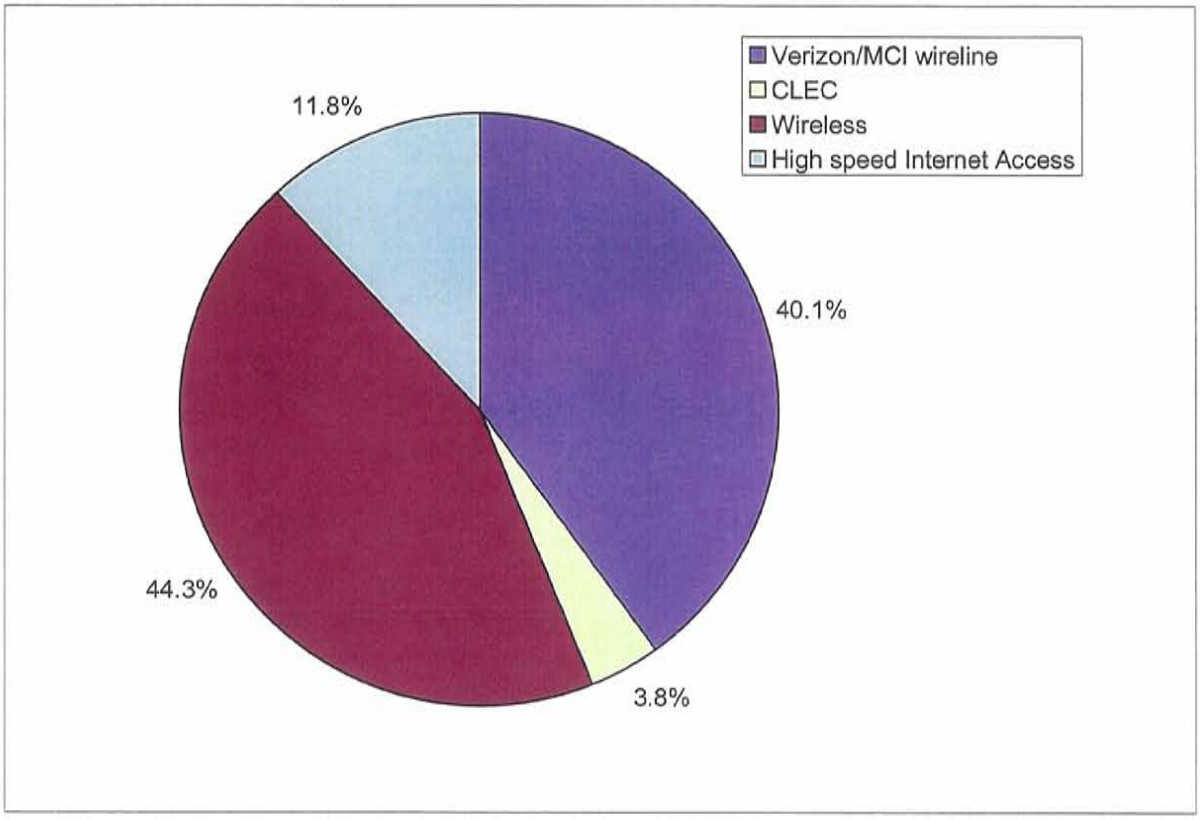
[END CONFIDENTIAL]

Another perspective on Verizon's loss of overall share is shown in Figure 4 below, which shows the percentage of total connections (including wireline telephony, wireless telephony and broadband connections) served by Verizon voice lines, based on the survey conducted by Mr.

71. *See id.*
72. *See id.*

Newman. As the figure shows, Verizon voice lines now account for only 40.1 percent of all wireline telephony, wireless telephony and broadband connections.[73]

Figure 4: Verizon Share of Total Connections



IV. POTENTIAL COMPETITION AND ENTRY

While it is clear from the evidence presented above that actual competition already in the marketplace is extensive, even in the absence of additional entry, it is equally clear that entry has occurred, is occurring and is likely to continue occurring in the future. Competition in the BCR MSA is thus certain to become more intense in the coming months and years.

First, both cable infrastructures, which together pass 70 percent of all households, are upgraded and ready for deployment of cable telephony. Thus, both Comcast and Charter could deploy BLETS, OLETS and bundled retail telephone services very quickly and with minimal additional investment.

Other facilities-based CLECs are also well-positioned to expand their offerings. **[BEGIN CONFIDENTIAL]**

73. *See* Exhibit VA-22.

[END CONFIDENTIAL][74] Citizens and Shentel also have substantial facilities and are already serving customers in the region, and either or both could expand quickly and with little or nor additional investment, especially if Verizon were to attempt to raise prices above competitive levels.

Wireless companies are also in a position to expand their presence in the region. NTELOS, for example, was the winning bidder for spectrum in Giles County in the recent AWS spectrum auction, and could easily use the spectrum to begin offering its Portable Broadband product.[75] B2X has announced plans for further expansion to Montgomery County.[76]

More broadly, barriers to entry in the BCR MSA are extremely low. The BCR MSA has extensive access to high-capacity fiber optic cable through Network Virginia, a project in which Sprint and Verizon have collaborated with the Blacksburg Electronic Village to make tier-one access to the Internet widely available throughout the region.[77] ValleyNet and NTELOS also operate multiple points of presence in the region, and new fiber, including a point of presence in Christiansburg, is being installed by KDL as part of its construction of a fiber optic network throughout the southern portion of the state.[78] The widespread presence of cell towers throughout the region (there are towers in all eight wire center areas, and eight new towers have been constructed since 2004) means that the mobile and fixed wireless entry is also inexpensive. Finally, much of the BCR MSA is rural, and therefore potentially eligible for funding from the RUS. Moreover, all three counties in the BCR MSA (Giles, Montgomery, and Pulaski) and Radford, an independent city, are eligible for support from the Appalachian Regional Commission.[79]

V. CONCLUSION

Competition for retail telephone services in the BCR MSA is intense and certain to become more intense in coming years. By every measure, Verizon is already losing customers to traditional CLECs and intermodal competitors at a rapid pace, and this decline is taking place *at current prices.* Cable companies have fully upgraded their infrastructures and are in a position to begin offering telephone services quickly and without significant additional investments. If Verizon were to raise prices, it would both accelerate the rate at which it is losing customers to existing competitive services,[80] and increase the rate at which competitors and potential competitors deploy new services in the market. The current state of competition, combined with the imminent threat of region-wide entry by cable telephony and the ability of other actual and

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74. *See id.*
75. *See* FCC, Auction 66 – Advanced Wireless Services (AWS -1), *available at* http://wireless.fcc.gov/auctions/default.htm?job=auction_summary&id=66 (last visited Nov. 21, 2006).
76. B2X, Availability, http://www.b2xonline.com/availability.asp (last visited Nov. 28, 2006).
77. *See* Jeffrey Crowder, "Access to Tier One Networks for Rural Virginia Counties," Blacksburg Electronic Village, April 2004, *available at* http://top.bev.net/archive/tamp/7-Common_Appendices/Main_Project_Papers/Access_to_Tier_One_Networks.pdf
78. *See* Eisenach Testimony at III.B.
79. *See* Eisenach Testimony at Table 4.
80. An analysis conducted by Mr. Taylor estimates that a decision by Verizon to raise prices by 5 percent in the BCR MSA would result in a *net* revenue loss of **[BEGIN CONFIDENTIAL]** **[END CONFIDENTIAL]** annually. *See* Taylor Testimony, Table 14 at 94.

potential competitors rapidly to enter or expand their offerings, is fully adequate to regulate the price of Verizon's retail telephone services in this region.

BCR-3

Wire Centers by Rate Group, Exchange, City and County

REGION	LOC ST	WIRECENTER	LOCATION NAME	Rate Group	Exchange	CENTRAL OFFICE CITY	COUNTY
BLACKSBURG-CHRISTIANSBURG-RADFORD, VA	VA-E	BLBGVABB	BLACKSBURG VA	06	BLACKSBURG	BLACKSBURG	Montgomery
		CRBGVACB	CHRISTIANSBURG	07	CHRISTIANSBURG	CHRISTIANSBURG	Montgomery
		DBLNVADU	DUBLIN VA	06	DUBLIN	DUBLIN	Pulaski
		NRWSVANA	NARROWS VA	03	NARROWS	NARROWS	Giles
		PLSKVAPU	PULASKI VA	03	PULASKI	PULASKI	Pulaski
		PRBGVAPB	PEARISBURG VA	06	PEARISBURG	PEARISBURG	Giles
		RDFRVARA	RADFORD VA	06	RADFORD	RADFORD	Radford City
		SHVLVASW	SHAWSVILLE VA	07	SHAWSVILLE	SHAWSVILLE	Montgomery

BCR-4

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BCR-5

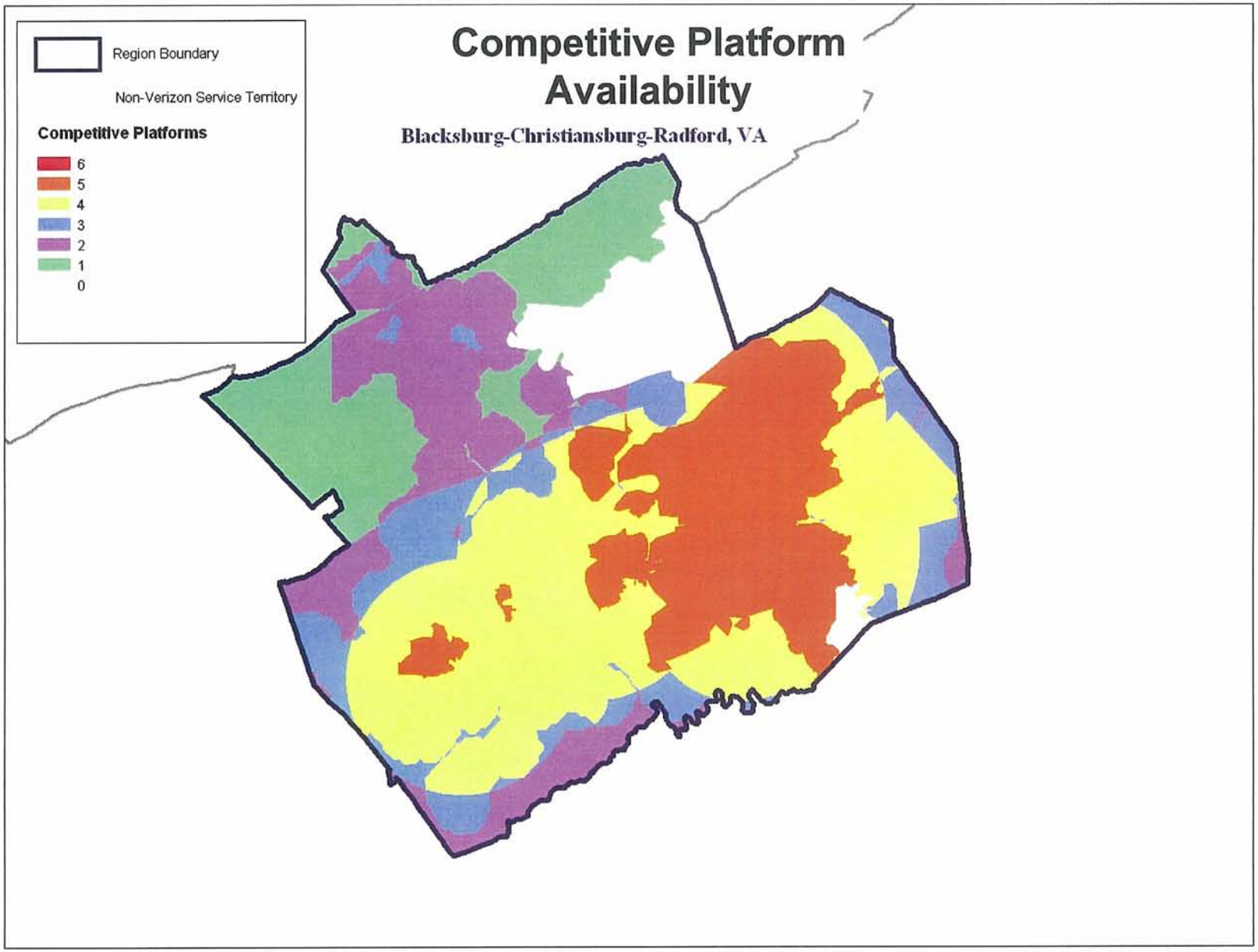


Exhibit BCR-5

BCR-6

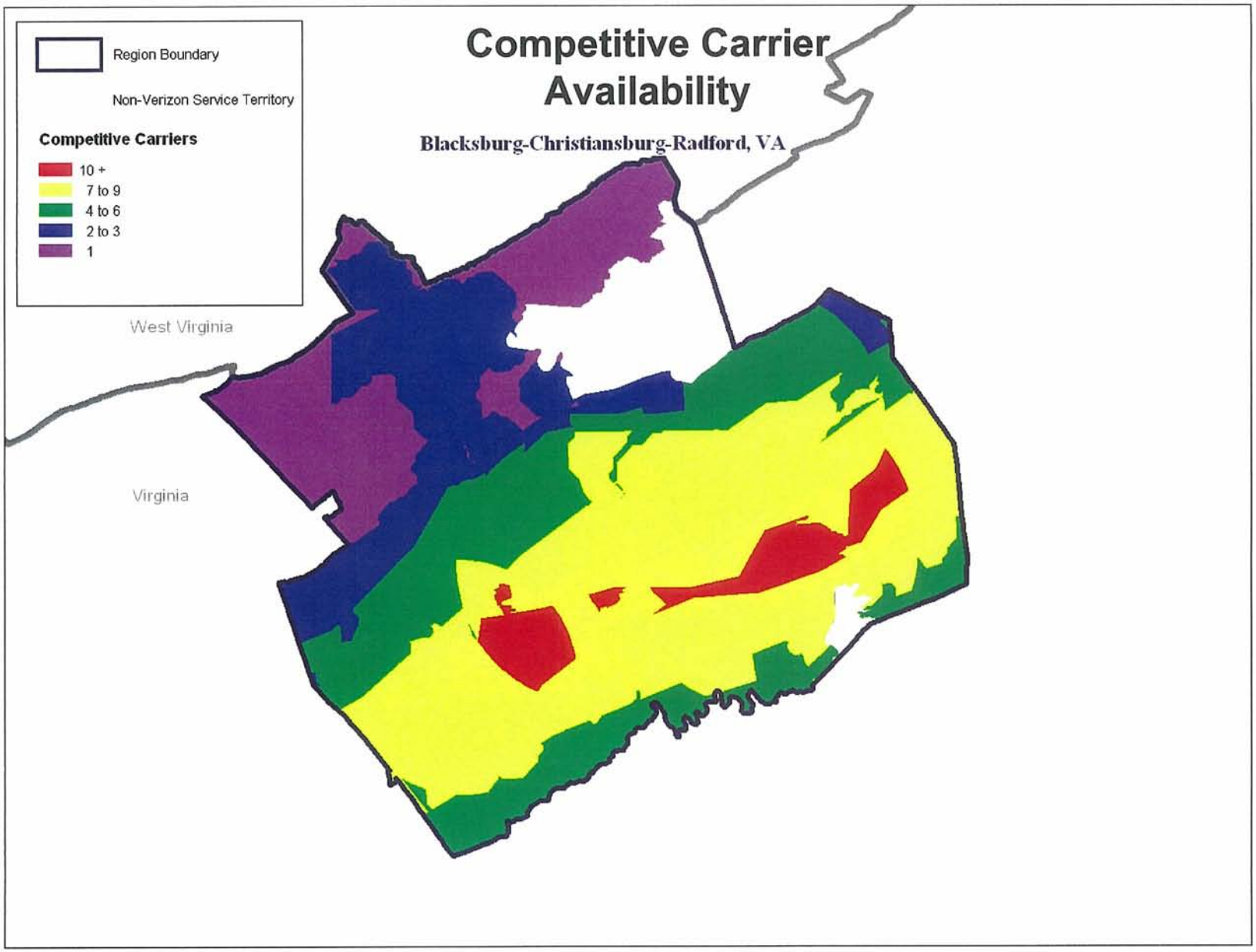


Exhibit BCR-6

BCR-7

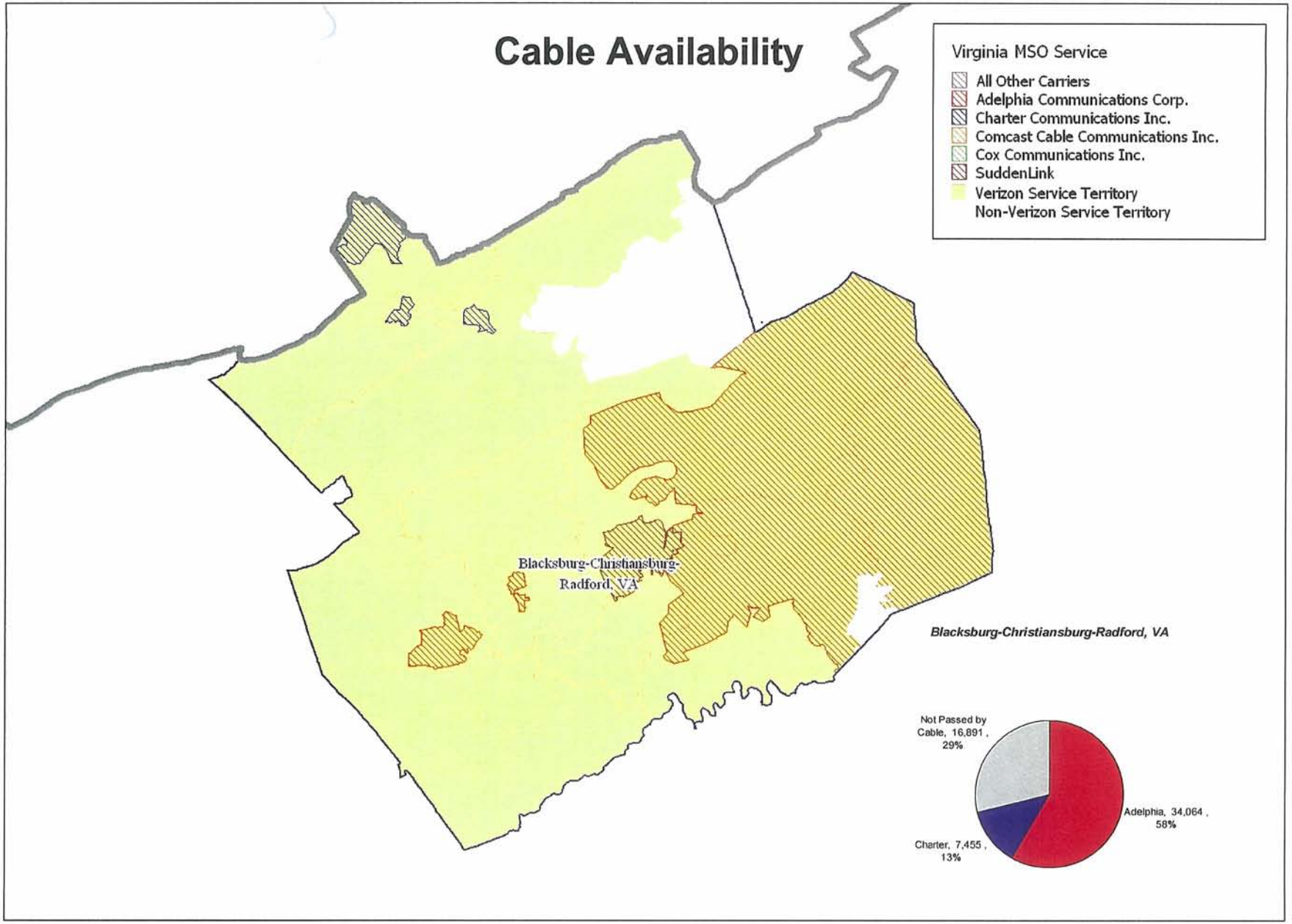


Exhibit BCR-7

Note: HH numbers reflect only those households in Verizon's Service Territory

BCR-8

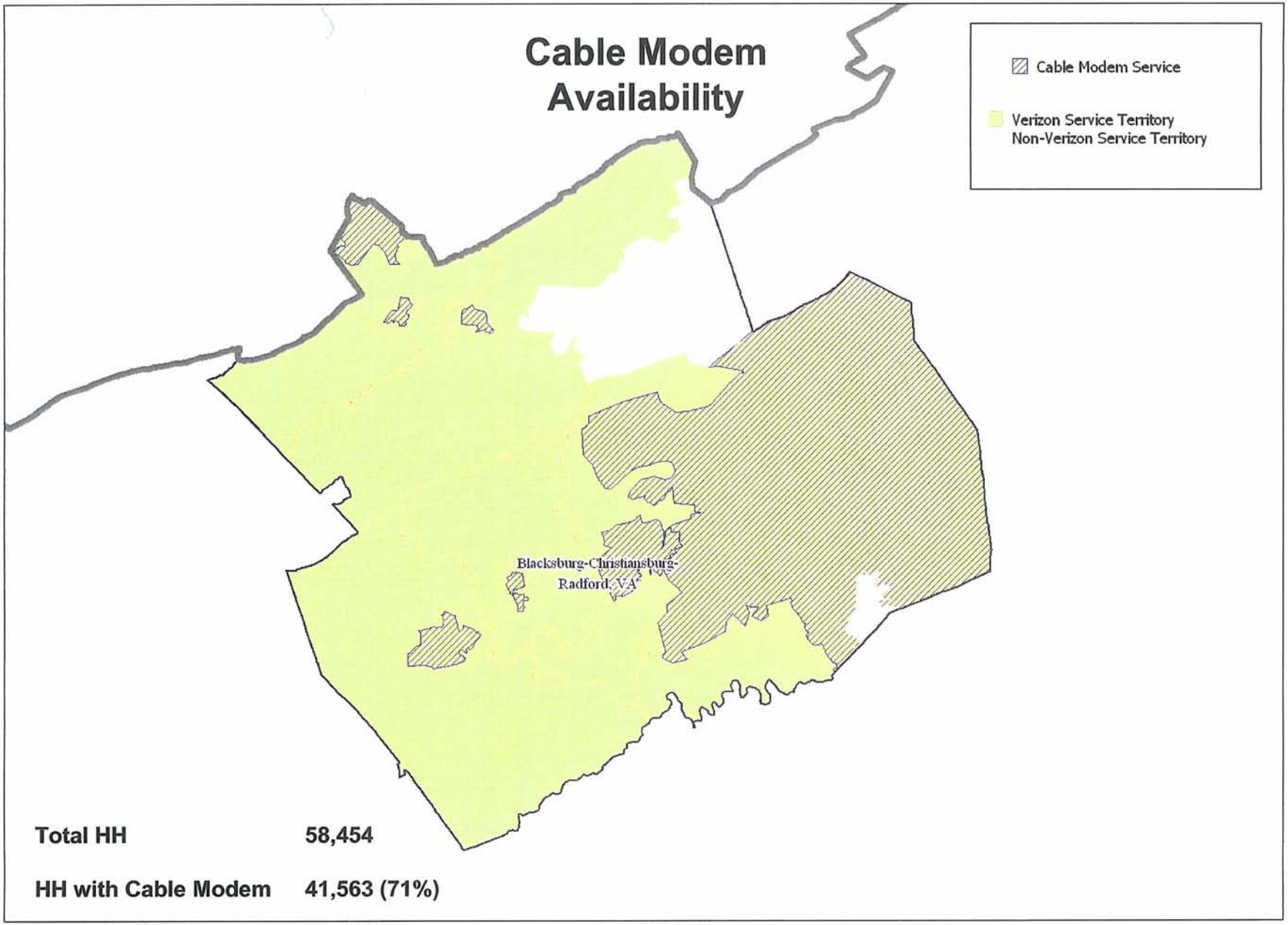


Exhibit BCR-8

Note: HH numbers reflect only those households in Verizon's Service Territory

BCR-9

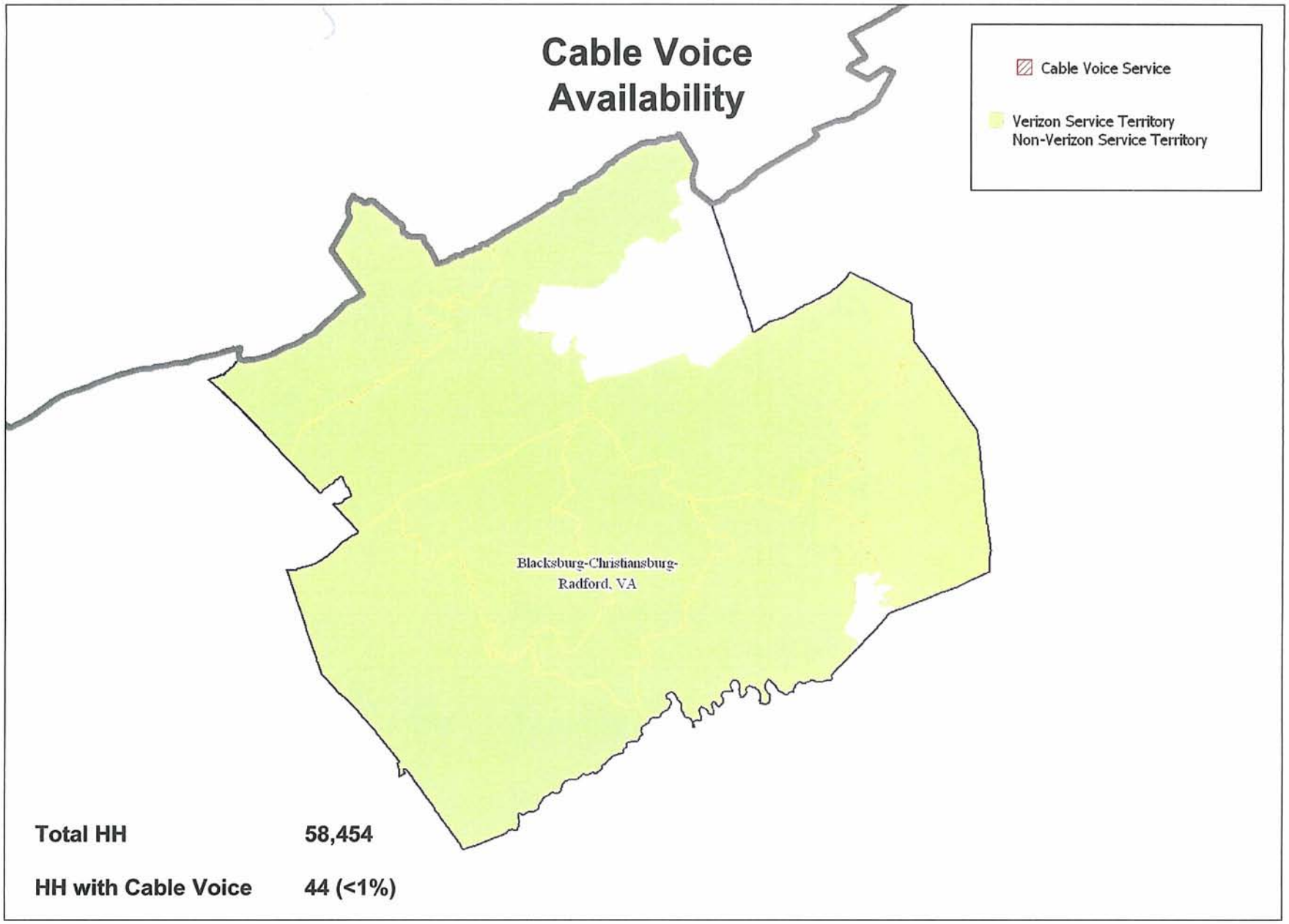


Exhibit BCR-9

Note: HH numbers reflect only those households in Verizon's Service Territory

BCR-10

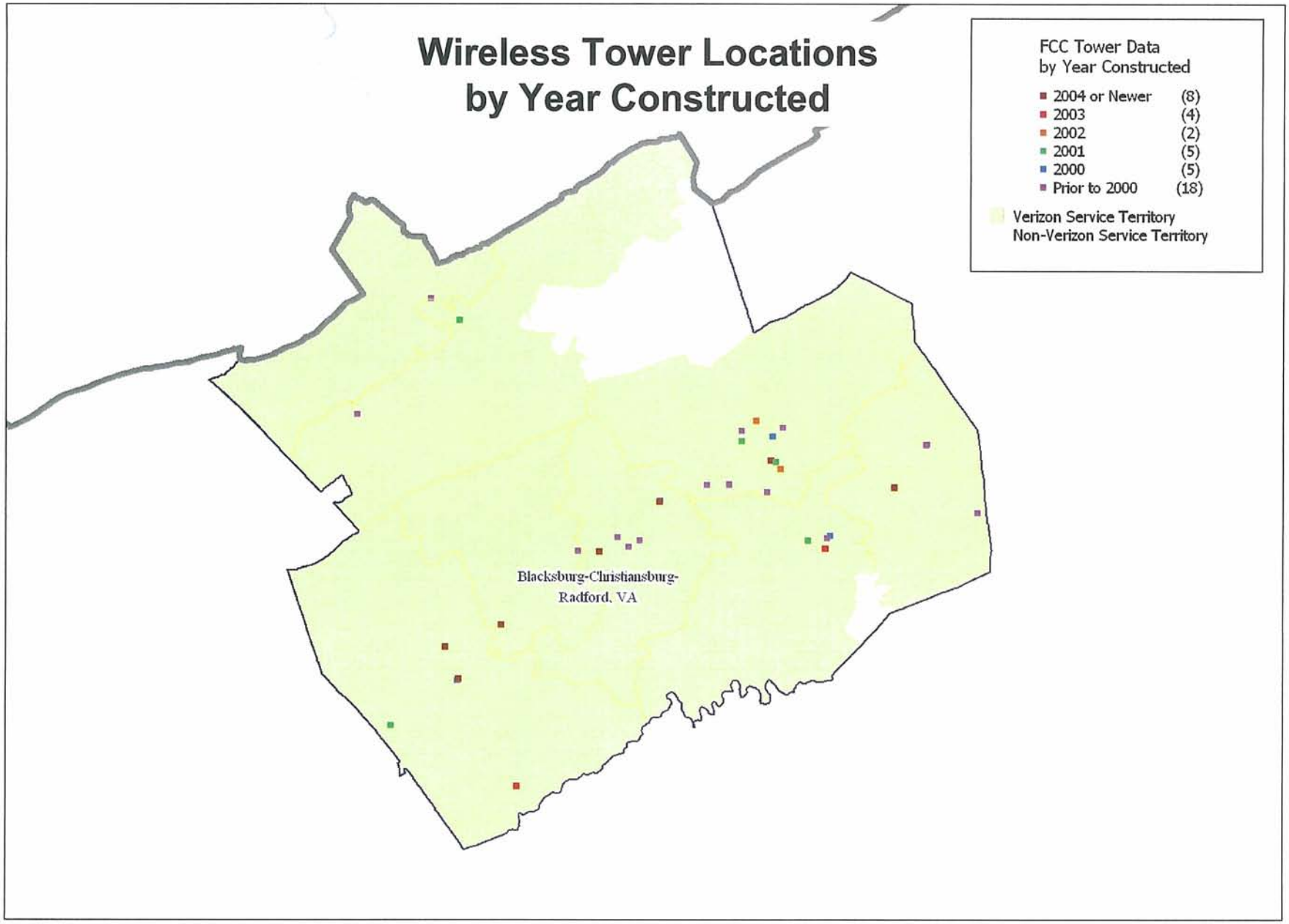
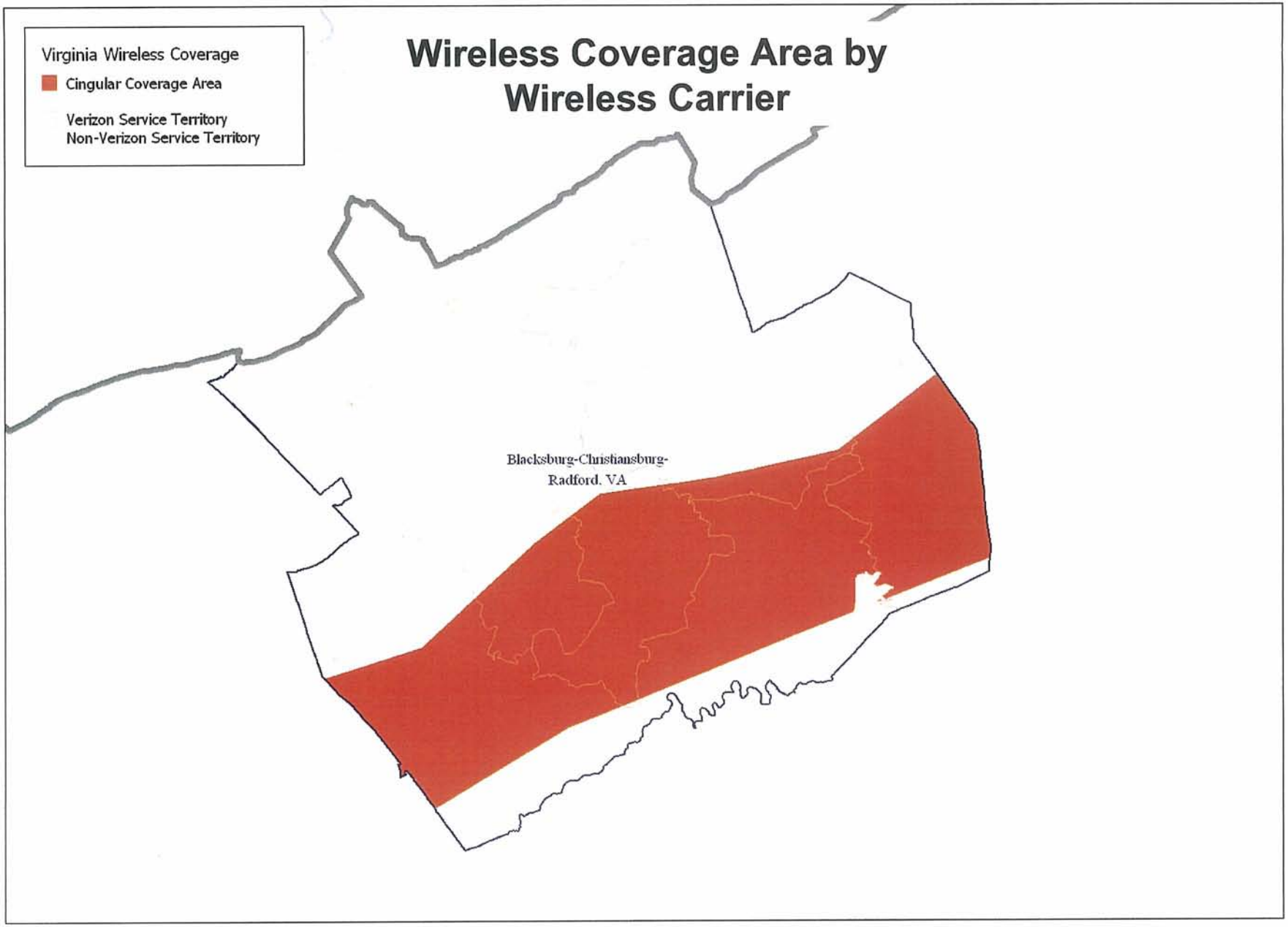
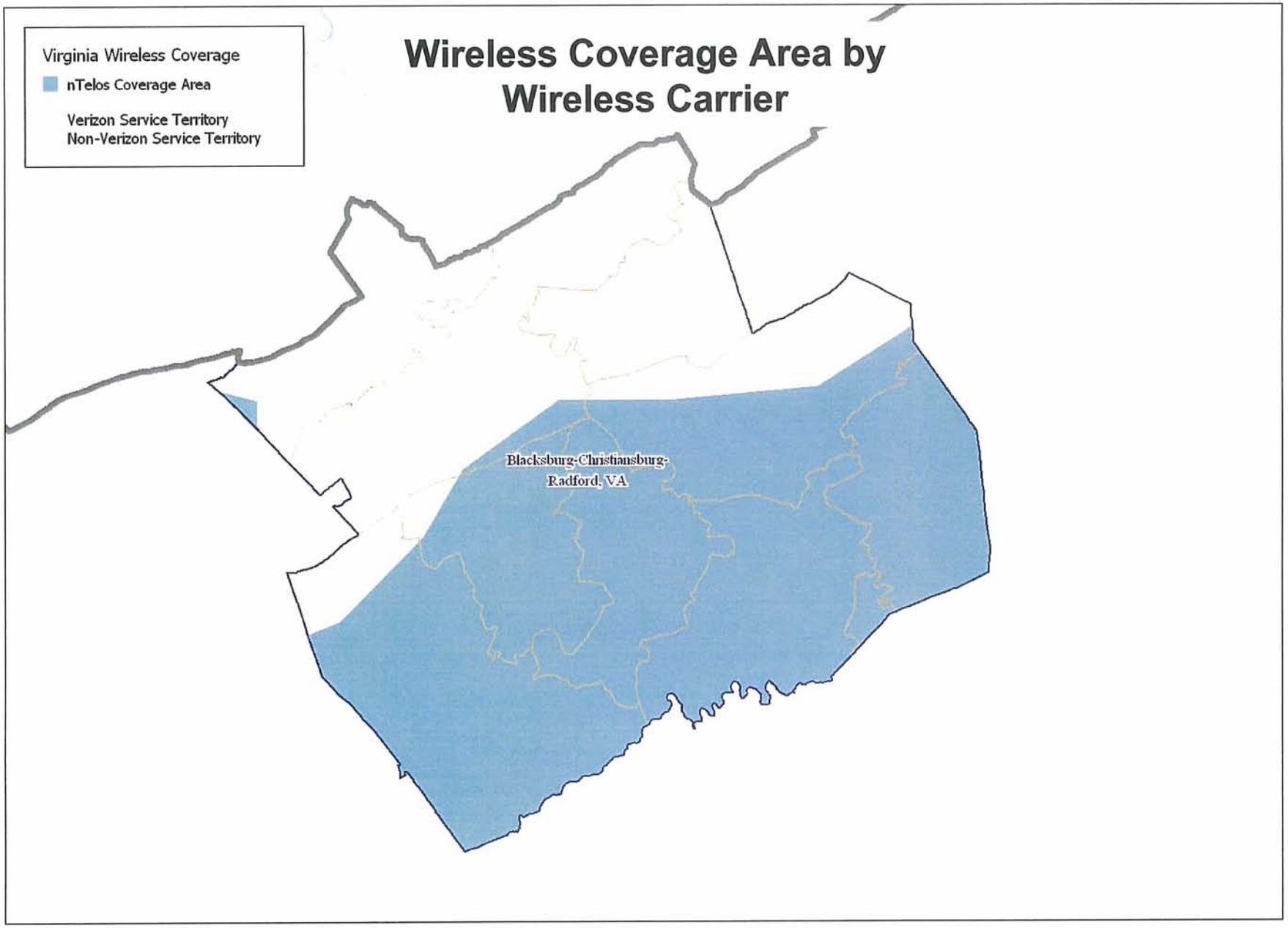
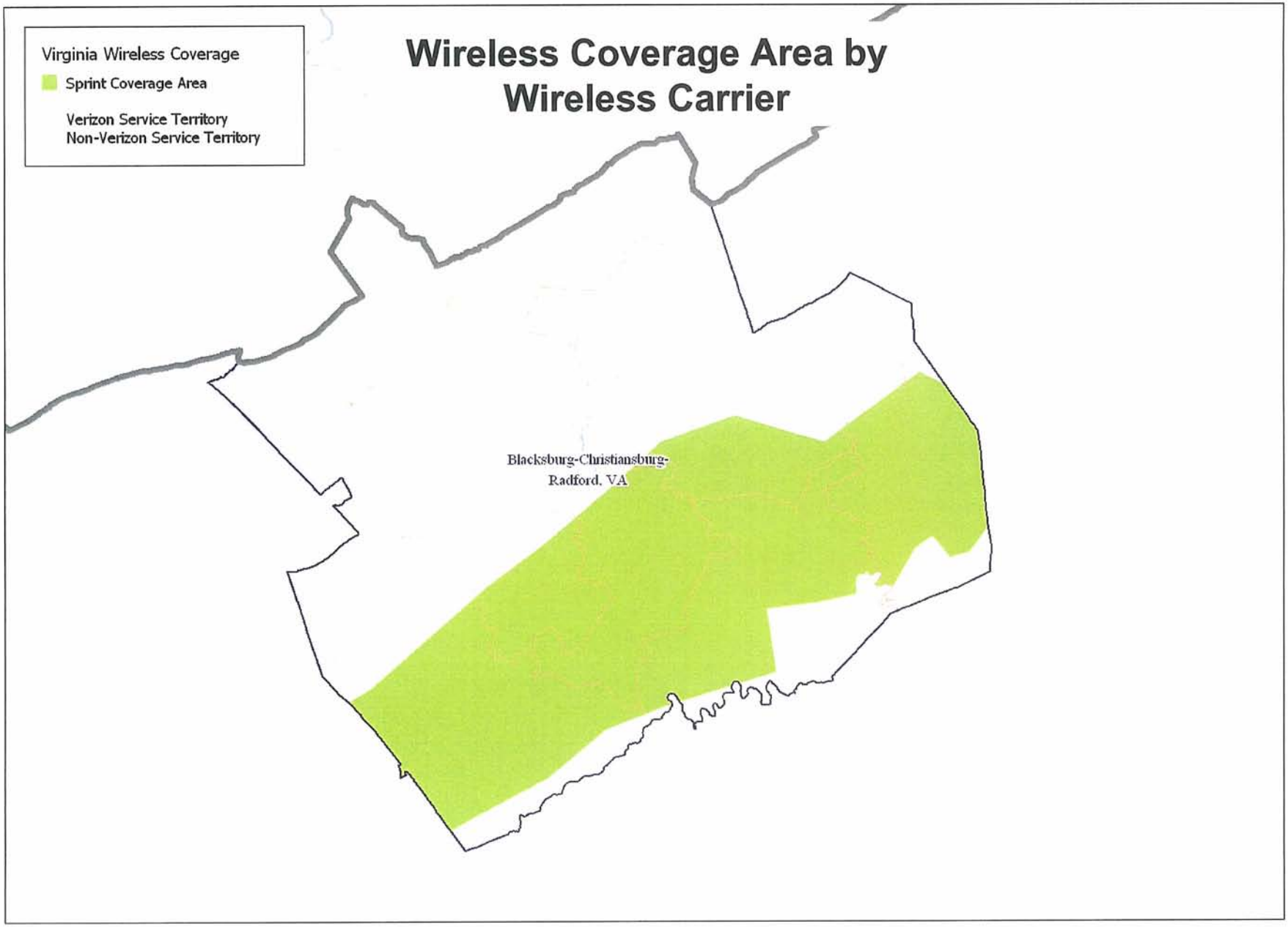


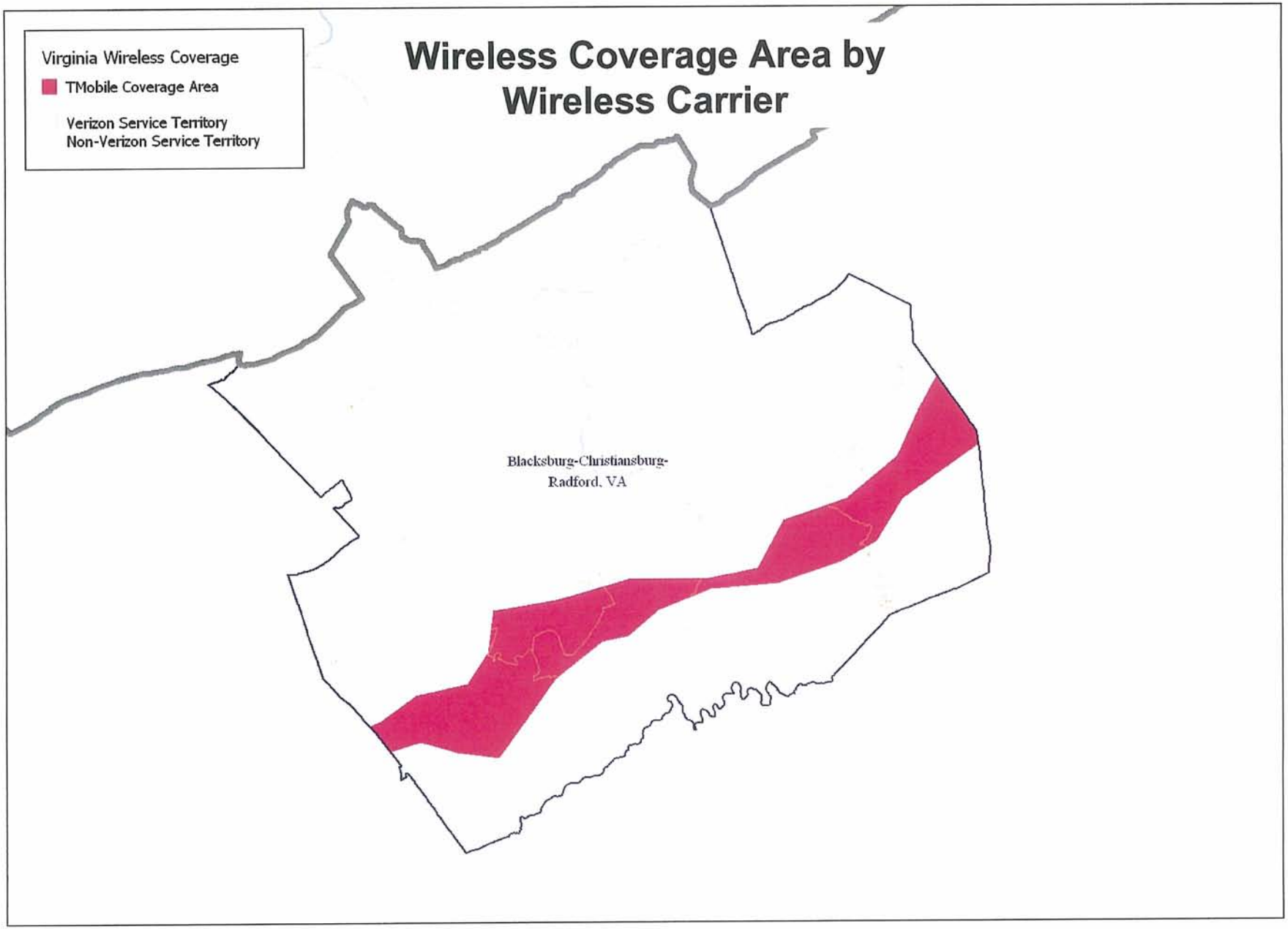
Exhibit BCR-10

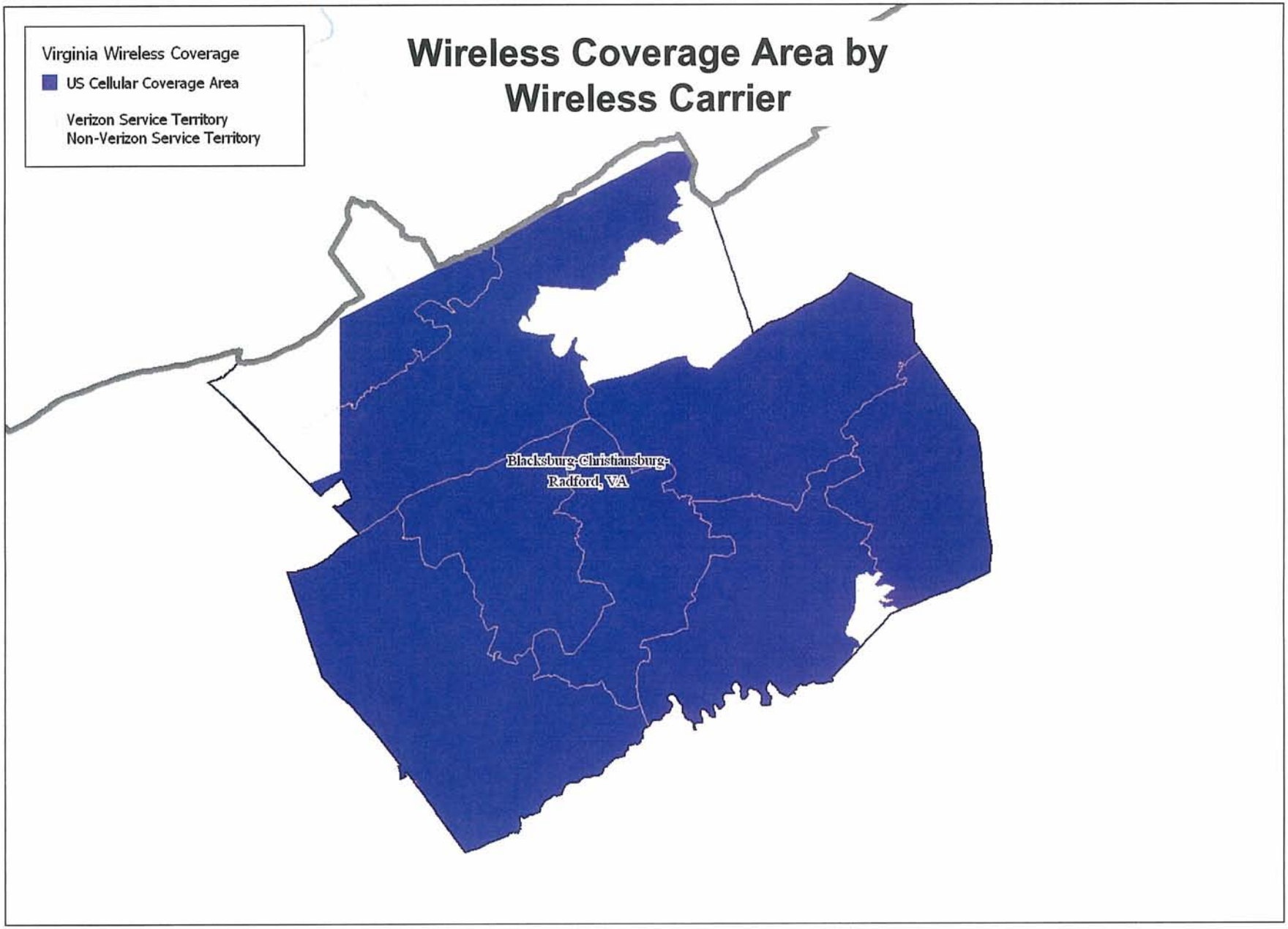
BCR-11

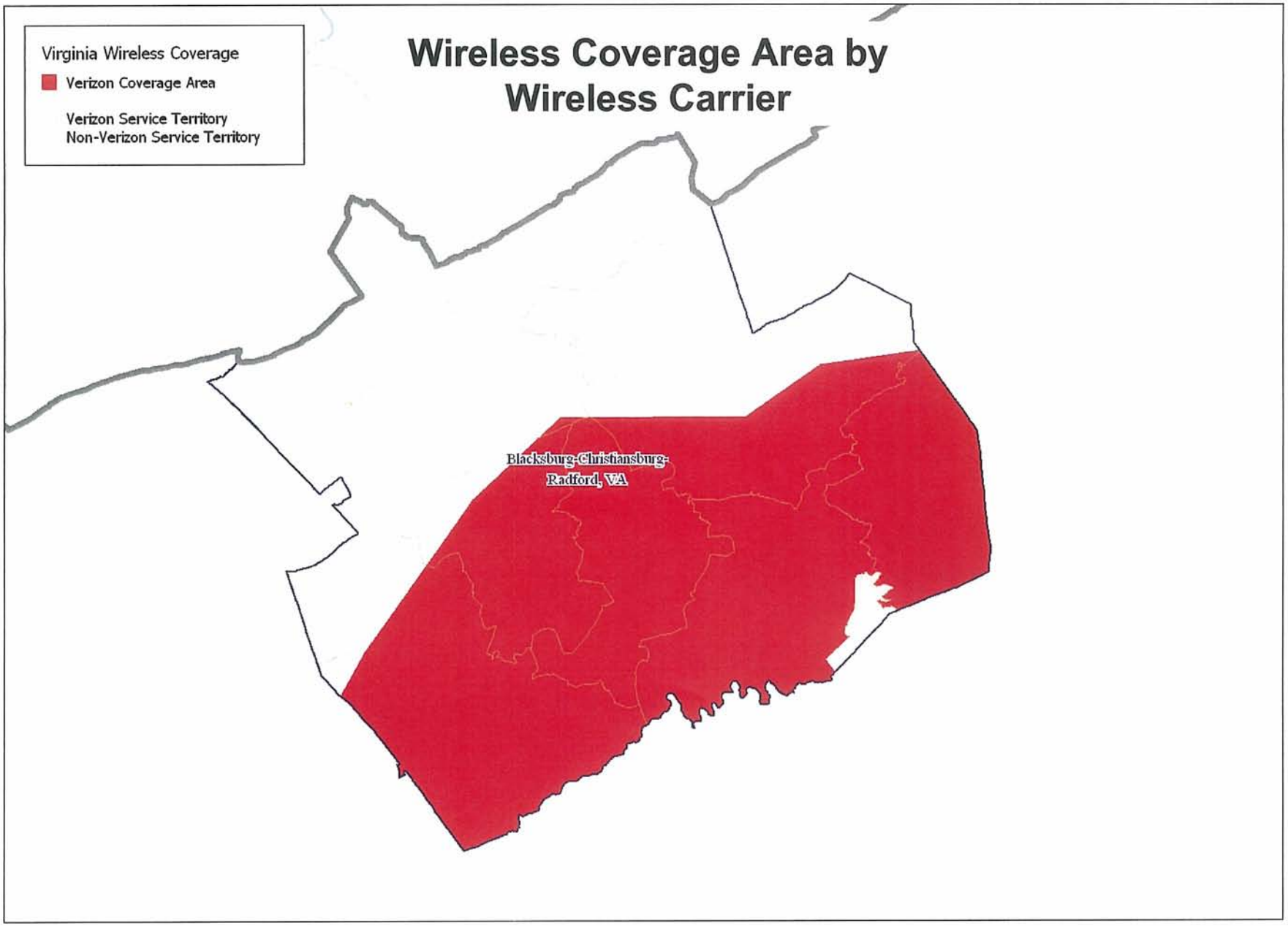

Virginia Wireless Coverage
Cingular Coverage Area
Verizon Service Territory
Non-Verizon Service Territory
Wireless Coverage Area by Wireless Carrier
Blacksburg-Christiansburg-Radford, VA


Virginia Wireless Coverage
nTelos Coverage Area
Verizon Service Territory
Non-Verizon Service Territory
Wireless Coverage Area by Wireless Carrier
Blacksburg-Christiansburg-Radford, VA


Virginia Wireless Coverage
Sprint Coverage Area
Verizon Service Territory
Non-Verizon Service Territory
Wireless Coverage Area by Wireless Carrier
Blacksburg-Christiansburg-Radford, VA


Virginia Wireless Coverage
TMobile Coverage Area
Verizon Service Territory
Non-Verizon Service Territory
Wireless Coverage Area by Wireless Carrier
Blacksburg-Christiansburg-Radford, VA


Virginia Wireless Coverage
US Cellular Coverage Area
Verizon Service Territory
Non-Verizon Service Territory
Wireless Coverage Area by
Wireless Carrier
Blacksburg-Christiansburg-
Radford, VA


Virginia Wireless Coverage
Verizon Coverage Area
Verizon Service Territory
Non-Verizon Service Territory
Wireless Coverage Area by Wireless Carrier
Blacksburg-Christiansburg-Radford, VA

BCR-12

Wireless Coverage Area by Number of Carriers

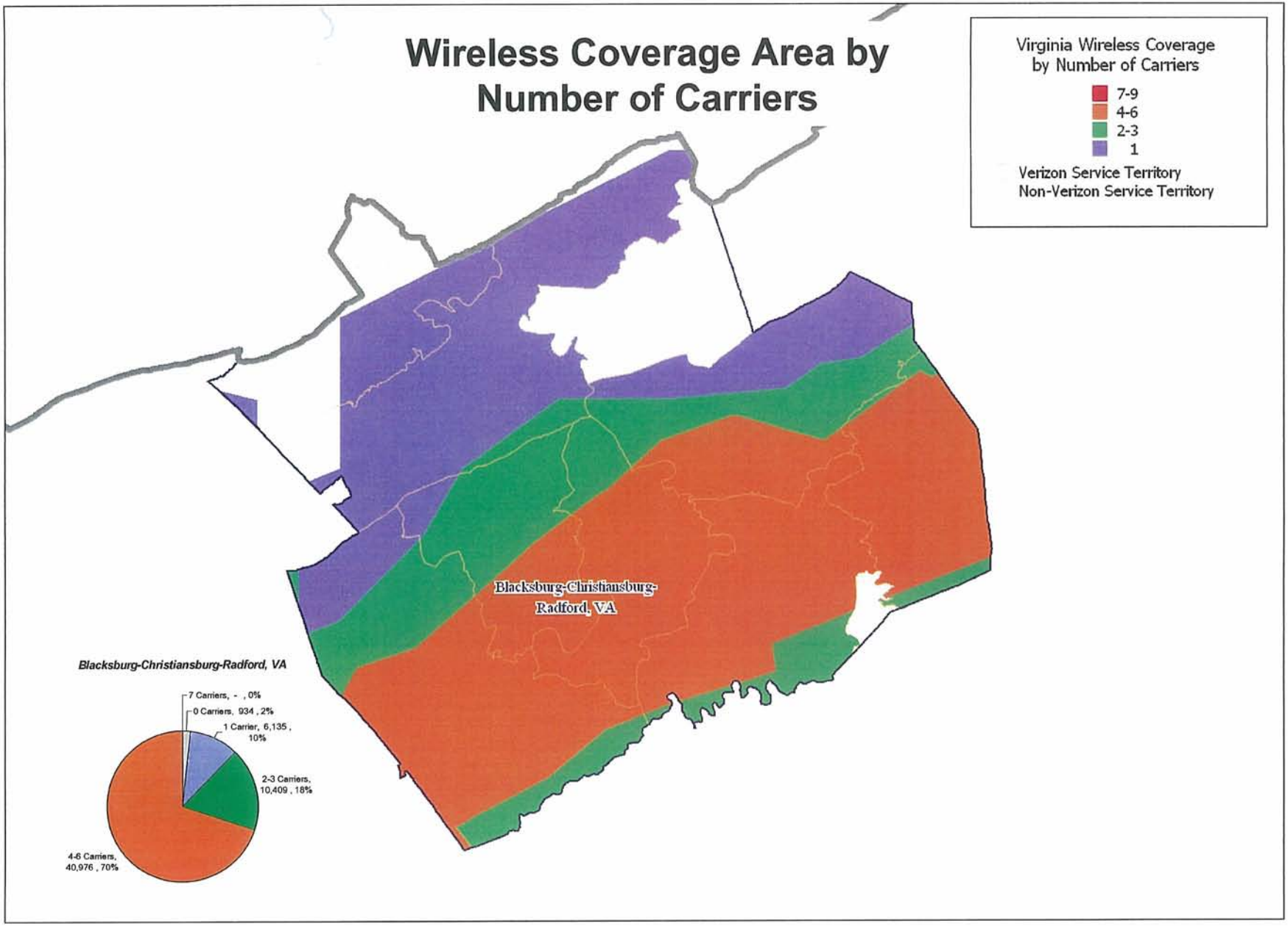


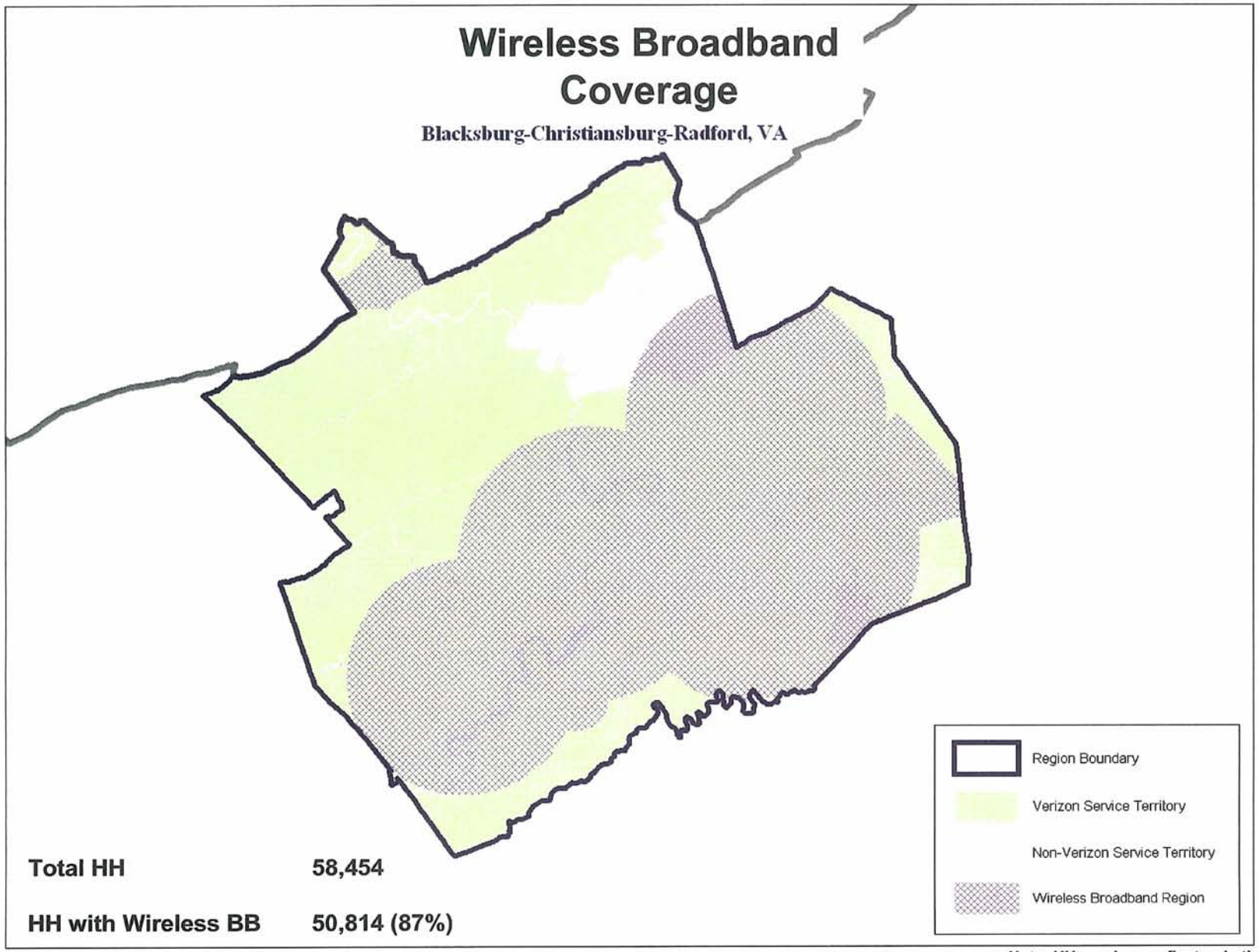
Exhibit BCR-12

Note: HH numbers reflect only those households in Verizon's Service Territory

BCR-13

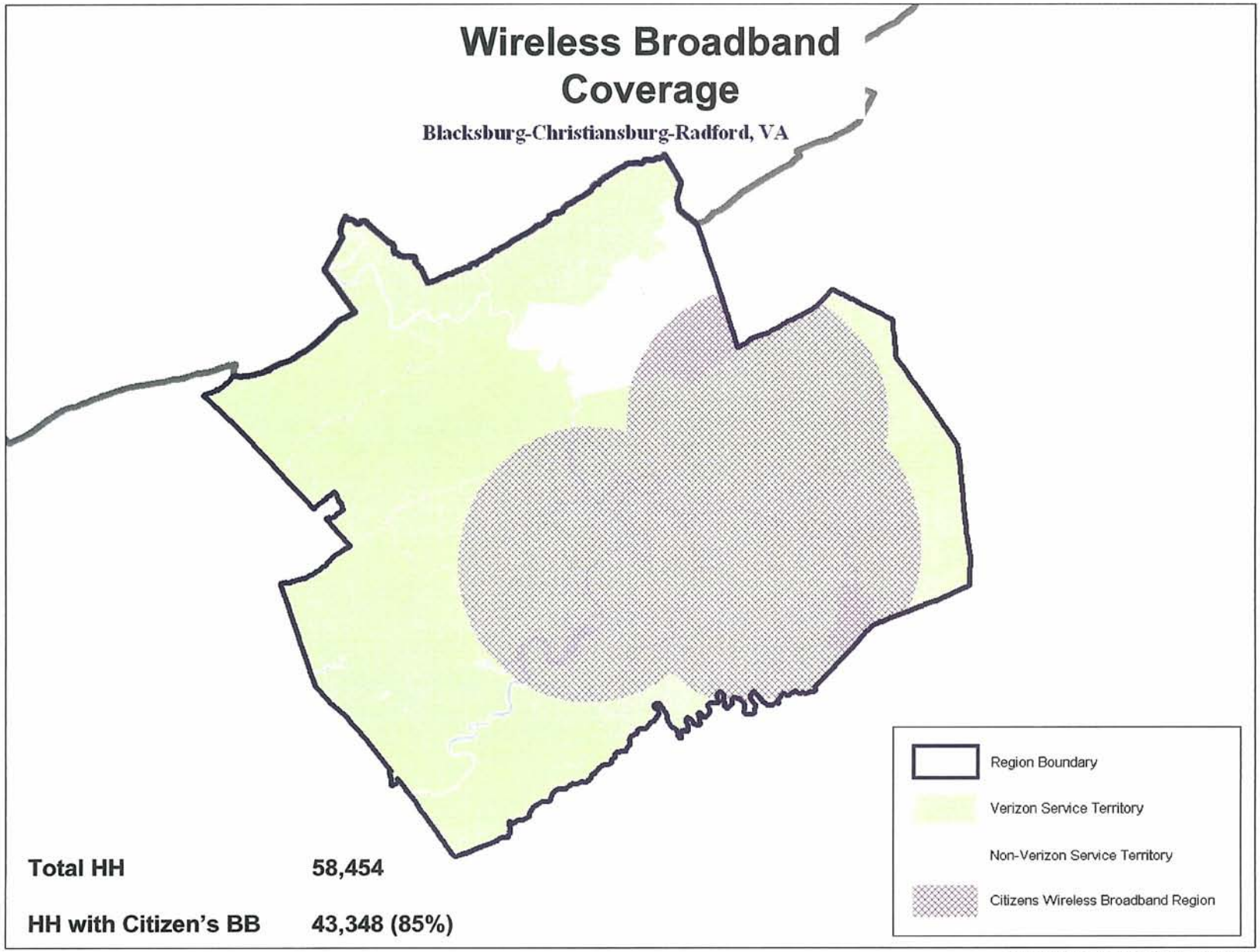
Wireless Broadband Coverage

Blacksburg-Christiansburg-Radford, VA



Total HH	**58,454**
HH with Wireless BB	**50,814 (87%)**

Note: HH numbers reflect only those households in Verizon's Service Territory



Note: HH numbers reflect only those households in Verizon's Service Territory

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EXHIBIT BCR-14

BCR-15

CONFIDENTIAL

EXHIBIT BCR-15

BCR-16

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EXHIBIT BCR-16

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CONFIDENTIAL

EXHIBIT BCR-17

BCR-18

CONFIDENTIAL

EXHIBIT BCR-18

BCR-19

CONFIDENTIAL

EXHIBIT BCR-19.

CONFIDENTIAL
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